Giving Freight a Voice

by S. Lawrence Paulson

Port of Long Beach

Containerized freight is transferred between ship and truck at the Port of Long Beach.

Freight transportation may not rank high in the glamour department, but we could not do without it.

Nearly 12.7 billion metric tons (14 billion short tons) of goods and raw materials valued at $8 trillion moved over the U.S. transportation system in 1997 (the last year for which statistics are available). That year, trucks hauled 58 percent of total U.S. freight tonnage, representing almost 70 percent of the U.S. freight value.

Yet, experts agree that freight transportation hasn't always gotten the policy attention — and funding — it deserves. But the U.S. Department of Transportation has begun a major effort to put the spotlight on this vital part of our national economic system, and the Federal Highway Administration (FHWA) plays a key role in the endeavor.

"Freight's Voice"

An important step in this effort was the decision in 1999 to create the Office of Freight Management and Operations in FHWA. Referred to as "Freight's Voice at the Federal Highway Administration," the office is involved in all aspects of freight, including strategic planning, policy development, research and analysis, and truck size and weight enforcement. According to its mission statement, the office "provides programs, policy recommendations, research, and technology transfers that promote efficient and seamless freight flow on the highway system and its intermodal connectors, within the U.S. and across its borders."

"One of the goals of the office was to create a focal point within FHWA to give visibility to freight issues and to coordinate with the other modes of transportation," said Gary Maring, director of the freight

office. "I think we're reasonably satisfied with what we've accomplished in two years."

But there's clearly a lot that remains to be done, especially in the key area of improving the connections from highways in the National Highway System (NHS) to major intermodal freight transfer facilities. A report to Congress (*NHS Intermodal Freight Connectors*), released in December 2000, noted that NHS carries approximately 75 percent of the vehicle-miles of travel by commercial trucks. While intermodal freight connectors constitute less than 1 percent of total NHS mileage, "they are the 'front door' to the freight community for a broad array of intermodal transport services and options," the report said.

Intermodal connectors are short — about three kilometers (less than two miles) in length on average — and are usually local, county, or city streets that carry a large volume of heavy-truck traffic moving between freight terminals and NHS highways, primarily in major metropolitan areas. With many heavy trucks using these city streets, it is not surprising that the report found that connectors to most freight terminals have twice the percentage of mileage with pavement deficiencies as other non-interstate NHS routes.

"A lot of the connectors — the ones that are going into ports, for example — are located in older, industrialized areas," explained Harry Caldwell, chief of the Freight Policy Team at FHWA. "In some cases, they're in transitional areas where there's a mix of land uses. They typically are surface streets that are signalized. They have a high preponderance of at-grade rail crossings. They often have inadequate turning radii, so they can't accommodate the turns of the longer, 48- and 53-foot [14.6- and 16.2-meter] trucks."

In a sense, NHS connectors are a microcosm of the problems facing freight, in general, when it comes to transportation decision-making at the state and local levels, the report said. "States and MPOs [metropolitan planning organizations] often see freight as a low priority when compared with the pressing needs of passenger travel. NHS connectors are 'orphans' in the traditional state and MPO planning processes." The generally low profile of freight operations in the community and the fact that most freight operations are conducted in the private sector make it difficult to focus public attention and resources on freight issues. "Consistent with freight initiatives in general, the challenge for NHS freight connectors is competition for public transportation funding resources."

MPOs and states, the report noted, sometimes view connectors as a benefit to only a small proportion of their constituents because other jurisdictions — the places of origination and final destination — receive most of the economic and service benefits from freight traffic. While several states and MPOs have freight advisory committees or similar bodies, "the translation of freight planning into a program of freight projects is problematic," the report said. Other impediments include environmental concerns and the competition for use of land near freight terminals in congested urban areas, especially along the waterfront.

"Compounding this is the lack of quantitative tools that allow local and state governments to properly evaluate the economic benefits of freight investment, including NHS connectors, to the region and nation as a whole," the report said. "The lack of a constituency to champion connector and other freight-oriented initiatives, combined with the lack of public understanding [of] the role these connectors play in the economic health of local communities and regions, makes successful intermodal freight development a challenging task."

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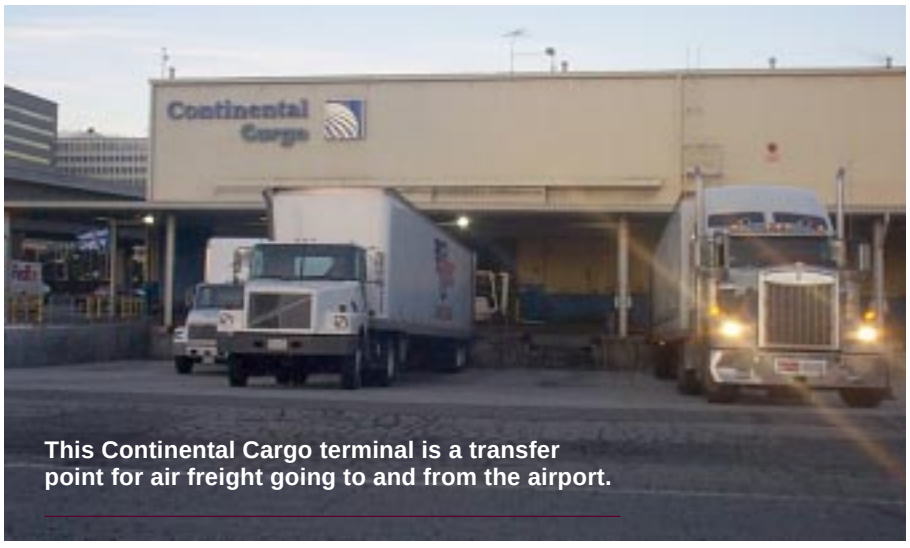
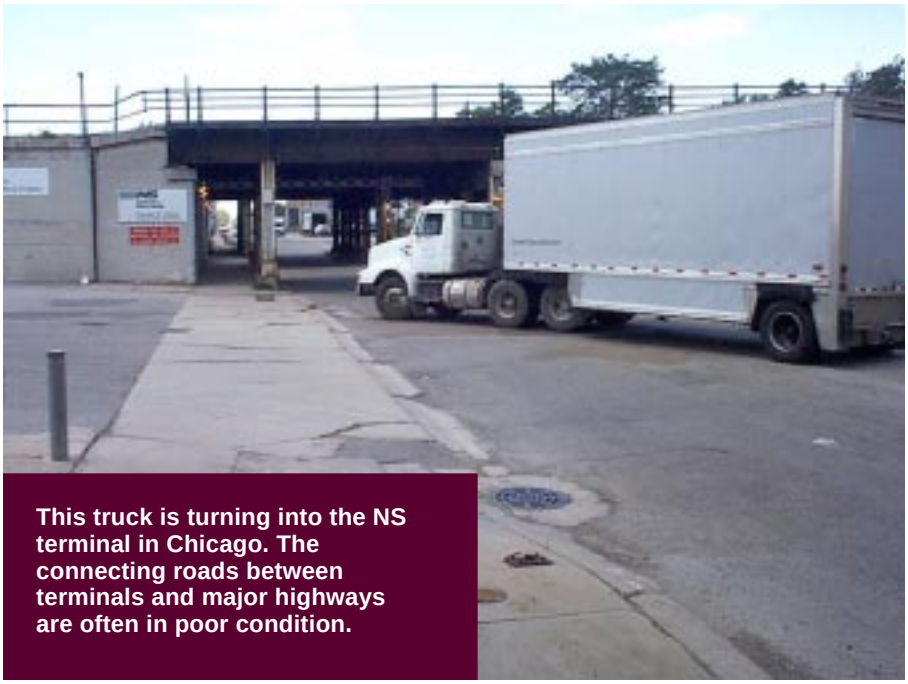
Meeting the Funding Challenge

Financing freight improvements is one of the challenges being addressed by the Office of Freight Management and Operations. As an initial effort in this area, the freight office recently studied the current practices in financing freight planning and infrastructure improvements and produced a report, *Funding and Institutional Options for Freight Infrastructure Improvements*, in August 2000.

The report set the stage by noting, "Intermodal facilities, and freight-related infrastructure in general, have faced many impediments since deregulation and subsequent greater free-market exposure. There have been many financial limitations as well as operational inefficiencies,



This Continental Cargo terminal is a transfer point for air freight going to and from the airport.



This truck is turning into the NS terminal in Chicago. The connecting roads between terminals and major highways are often in poor condition.

lack of institutional relationships, inadequate infrastructure, congestion problems and a wide variety of other impediments that have placed heavy burdens on the transportation intermodal infrastructure."

As a result, the report said, freight infrastructure projects — both network links and intermodal facility improvements — are being developed on a case-by-case basis, funded through public-private partnerships or simply with private-sector resources designed to maximize private profits. Highway projects that benefit freight movement have important sources of funding in the Transportation Equity Act for the 21st Century (TEA-21), which included innovations such as the Transportation Infrastructure Finance and Innovation Act (TIFIA). TIFIA initiated significant loan programs that support infrastructure improvements. But the report noted that local and state project planning has been "affected by a lack of analytical tools for comparing a freight-related highway improvement project to a project that predominantly benefits commuter or neighborhood traffic."

The report presents a number of case studies of freight-related projects that feature innovative uses of federal funding and loan programs, including State Infrastructure Bank (SIB) and TIFIA loans, Congestion Mitigation Air Quality (CMAQ) funds, and Grant Anticipation Revenue Vehicle (GARVEE) bonds. The 26 federal case studies in the report include:

- Ohio's Spring-Sandusky Interchange Project, which will improve connections and traffic flow in downtown Columbus. The project includes the relocation of U.S. Route 33; new construction on Interstate 670 and State Route 315; and related paving, grading, and drainage work. Helping to defray the $116 million cost of this project is $70 million in GARVEE bonds issued by the State of Ohio in May 1998.
- The Laredo (Texas) International Bridge, which connects Laredo with Nuevo Laredo, Mexico. The eight-lane vehicular and pedestrian bridge project is owned and operated by the city of Laredo and includes a toll plaza, import-export lot, customs station, and related roadways. The project will alleviate congestion on the existing toll bridge station and within Laredo. The cost of $44.5 million is covered by a package of loans, including five-year and 23-year SIB loans and bonds issued by the city of Laredo.
- The Auburn Intermodal Facility, a $3 million truck-rail intermodal yard built in 1993 in Auburn, Maine. A private company leases the facility and 15 hectares (37 acres) of land from the city of Auburn. The transfer facility is expected to attract substantial truck traffic to rail by making possible 36-hour service between Auburn and Chicago using cargo train. The result will be reduced emissions and congestion along the route and a reduced need for highway maintenance. CMAQ funds covered $2.3 million of the cost, and the remainder came from the city of Auburn and from the St. Lawrence and Atlantic Railroad Co.
- The Kedzie Stoplight project, which began as a simple traffic signal installation at the intersection of a highway and the BNSF Corwith Intermodal Terminal in Chicago and grew into the full reconstruction and repaving of Kedzie Avenue between the Corwith entrance and an expressway. A Transportation Research Board (TRB) report called the Kedzie project a "poster child" for TEA-21's predecessor, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), because it demonstrated the difficulty of undertaking small projects in isolation — no matter how simple or cost-efficient they are — without taking into account their connection to a more complex traffic and transportation system. The $3.5 million cost of the project came from CMAQ ($720,000) and from the state and city departments of transportation. An additional $4 million was provided by the Illinois Department of Transportation for ancillary work, including drainage improvements, and private funding contributed to "inside the fence" improvements.

The freight office's report also listed case studies of projects that relied on state resources, including:

- The $35 million Clark Maritime Intermodal Center, which connects the port on the Indiana side of the Ohio River across from Louisville, Ky., to truck and rail terminals. While initially funded with $25 million in state-appropriated general funds, the facility is now self-sufficient.
- The Port of Palm Beach Skyway, a $43.5 million project providing

highway and rail access to the port, eliminating a highway-rail grade crossing. When the affected cities and MPO could not secure sufficient grants for the project, the Florida Seaport Transportation and Economic Development Program stepped in with matching funds. The port of Palm Beach paid the remainder.

The case studies clearly show that, while partnerships between federal, state, local, and private entities can open the doors to financing for important freight-enhancement projects, the funding dilemma can be complex and difficult.

A recent TRB study pointed out the special public-private interface inherent with many intermodal facilities. "The prevailing condition is for the mode to be privately owned, but the connection points (ports and terminals) and supporting infrastructure (roads, bridges, and utilities) to be under public ownership. Thus, while intermodal project benefits may be shared, intermodal financing is patched together from the traditional sources of funds and funding techniques."

More Pressure on the System

The challenges facing freight transportation planners are not likely to become less formidable. Companies are increasingly relying on "just-in-time" inventory systems that require freight to be delivered in a timely and predictable way.

"Using the transportation system as a form of rolling warehouse allows the private sector to reallocate its resources away from warehouse maintenance and leasing to basic and applied R&D [research and development], equipment development, and worker training and retraining," Caldwell said. "It allows them to actually use private assets for things that provide greater long-term productivity because they can use the transportation system as an ally and an asset. But as levels of congestion increase on our nation's transportation system, higher levels of unreliability and unpredictability are created, and that causes true problems for U.S. companies that have to rely on the system as a dependable asset."

Anne Strauss

Heavy truck traffic contributes to the congestion on this highway leading to the New Jersey Turnpike.

If the situation seems serious now, consider the freight office's projection that freight volumes will nearly double by 2020. And some areas will see even greater growth. Container traffic has been increasing at double-digit rates at the ports of Los Angeles and Long Beach for the past several years, and MPO officials believe that the population of Southern California will grow by more than 6 million people — about two times the population of Chicago — by 2020. That could mean a tripling of freight volumes at the ports in the next 20 years.

"They're trying to balance the community issues associated with that dramatic increase in population at the same time they're trying to sustain productivity and international trade commerce through that area. It's going to create some tremendous quality-of-life issues," said Caldwell.

The state of the surface transportation system is very, very important to the Department of Defense (DOD).

"If you recall just 10 years ago during Operation Desert Shield, leading up to Desert Storm, DOD moved six divisions in 180 days," Caldwell said. "Their goal today is to move five divisions in 30 days. Over the past 10 years, they have relocated a number of U.S. military units from abroad back stateside; they've co-located in 17 so-called power projection platforms — 15 Army and two Marine.

"They've defined highway links that generally correspond with some of the major trade routes in the country, and they're expecting a high quality of service on those key highway segments to enable them to mobilize on the commander in chief's orders in the event we have a national mobilization. Reliability is as important to national security as it is to freight productivity."

Looking Toward Reauthorization

The Office of Freight Management and Operations has its eye on 2020, but it's also looking at another important date — 2003. That's the year Congress will consider a surface transportation reauthorization bill to succeed TEA-21, and the stakes for freight, given the projections of freight volume and other stresses on the surface transportation system, could hardly be higher. The writing of the Department of Transportation's reauthorization bill will likely begin early in 2002, "so we basically have this year to do much of the analysis and policy development outreach," said Maring.

The freight office is already working hard to make the case that freight should play a prominent role in the nation's next comprehensive transportation plan. At a meeting with the trade press in January, freight office officials unveiled an outreach schedule for 2001 that includes several workshops: a freight finance conference in St. Louis in

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This truck carrying huge newspaper rolls is turning onto a road leading to a rail terminal.

This truck is transporting a container from a ship to its final delivery.

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Federal Express trucks deliver packages to and from FedEx air freight terminals. This truck is departing the terminal at Newark International Airport.

April; a multistate workshop co-sponsored with the I-95 Corridor Coalition and the American Association of State Highway and Transportation Officials in Washington, D.C., in June; a freight operations seminar in Los Angeles in July; a planning conference in Michigan in August; and international freight logistics conferences in Brownsville, Texas, and Ottawa, Canada, in September.

The outreach effort will culminate in a National Freight Forum in Washington, D.C., in December. The objective of the summit, which is sponsored by TRB and the U.S. Department of Transportation, is "to bring together the results from all the previous freight outreach sessions and advance policy options for consideration during reauthorization," Maring said.

Each of the conferences has a specific purpose, but the overall outreach program is designed to confront the three challenges — Maring calls them "areas of improvement" — facing the freight transportation sector:

- Institutional development: Establishing statewide and metropolitan freight advisory groups, coordinating with economic development planning, and developing multijurisdictional freight institutional approaches.
- Leveraging information technology to optimize system performance.
- Infrastructure investment: Expanding innovative financing options, confronting eligibility issues, and raising the emphasis on freight during the planning and programming process.

It all comes down to finding a place at the table for freight. As Caldwell said, "If you look at the history of our transportation system all the way back to the Erie Canal, it was developed because of interstate commerce — and in the case of the Interstate Highway System, interstate commerce and national defense — but for the past 40 or 50 years, we have focused almost exclusively on passenger issues. Now we're trying to recast the transportation development process the way it was originally envisioned — to pay a bit more attention to the need for goods movement as a way of linking together different parts of the nation and, of course, the world."

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For additional information about the programs and activities of the Office of Freight Management and Operations, visit its Web site at www.ops.fhwa.dot.gov/freight.